

ABSTRACT OF THE DISCLOSURE

A modular data storage system for handling and storing data cartridges comprises a cartridge access device and at least two laterally adjacent modular units. Each of the modular units may comprise a plurality of cartridge receiving devices and a plurality of elongate gear racks aligned along a displacement path. The elongate gear racks are substantially in alignment with one another such that the cartridge access device may be translated among the laterally adjacent modular units. The system further comprises a translation apparatus for moving a cartridge access device along a displacement path. The translation apparatus may comprise a plurality of drive pinions mounted to the cartridge access device and engaging the plurality of elongate gear racks, and a pinion drive apparatus operatively associated with the drive pinions. The pinion drive apparatus rotates the drive pinions to move the cartridge access device among the elongate gear racks of the adjacent modular units. The adjacent modular units may be comprised of a master modular unit and at least one slave modular unit. The master modular unit further comprises a power supply and may also comprise a control system operatively associated with the pinion drive apparatus, and each slave modular unit may be electrically connected to the power supply in the master modular unit.